bral atrophy, after inflammatory, necrobiotic or simple affections, partial softening may be the base of the mental weakness. The spinal cord, peripheral nerves, ganglia and the great sympathetic may be altered. Spinal affections are chiefly secondary, and especially to cerebropathies, properly speaking. Various observers have noticed associated lesions of the peripheral nerves, Affections of other organs may either accompany or cause various psychoses. Crupous pneumonia is not infrequent, but is often unobserved. Pulmonary gangrene may also be quite frequently seen. Phthisis often complicates, cardiac affections, generally valvular, are very often seen in necroscopics; the digestive tract is altered and sometimes may be the point of departure of depressive and hypochondriac mental diseases, accompanied by anesthetic sensorial aberrations which are significant. Catarrhal and ulcerative affections of the colon are frequent, and often epidemic in asylums. Diseases of the genito-urinary tract occupy an important place in insanity. The skin, from deficient hygeine, presents important changes, among which are the osteomatoma of paralytics. The bones are especially fragile; neurotic osteomalacia. The morphological changes in the skeleton correspond to alterations of the organism which may represent anomalies of development, stigmata of a constitutional disease, deformity of accidental origin, traumatism and physical stigmata of degeneration.—*Gazetta degli Ospitali*, No. 155, 1893. F. H. P.

A Contribution to the Study of Cephalgia.—As headache was present in plethora and anæmia, in febrile and afebrile diseases, and, in fact, almost every abnormal condition, an explanation of the phenomena had evoked considerable study. So far scientific research had not elucidated the mechanism of this morbid symptom, but this fact did not mean that there was not some satisfactory reason for the same symptom being produced in diametrically opposed conditions, such as hyperæmia and anæmia, for example. The history of a case was given which presented the following points of interest: during an attack of headache the patient's cutaneous blood vessels were much dilated, making the face very red, presenting the phenomena described in France as "femme autographique." It appeared pretty much as an attack of urticaria from indigestion. After several paroxysms of the headache the hair fell out in spots, resembling alopecia areata. New hair grew in, however, over the areas, but new spots of baldness appeared after each attack. Careful investigation revealed no cause for the headaches.

The author, Dr. S. Vermel, *Revue Générale de Clinique et de Therapeutique*, was inclined to attribute the disease to a hypersensitive condition of the sympathetic nerves controlling the peripheral vessels of the cranium and brain ; in other words, an angio-neurosis. He thought that the redness of the face and sclerotics, and the epistaxis, which was present during an attack, confirmed this opinion. It had been previously affirmed that pain in the head, was caused by some irritation to the cortex, now,while pain was an indication of irritation somewhere in the cranium, the author was not satisfied as to the cortex being the seat of the trouble. Tests on the cortex gave, locally, simply a hallucination of pain, but that real pain was exhibited on some part of the body, had been repeatedly demonstrated. It was definitely made out that the source of the attack of cephalgia was not due to local irritation of the cortex, but to changes in the meninges. The dura mater was richly supplied with ramifications of the trigeminus and vagus, and it was to the dilatation of the vessels in this region causing intracranial pressure, that the pain was due. This vascular dilatation extended to the minute blood-vessels in the region of the pituitary body, rupture of which, gave rise to the epistaxis from which the patient suffered during an attack.

This explanation might suffice to account for the headache in all disease where there was a hyperæmic condition, but did it answer for anæmic states? The author answered in the affirmative. He said that the change in anæmia was a qualatative and not a quantative one of the blood, and that the quantity of fluid in the vessels remained the same. In the presence of veritable anæmia, from abundant depletion of the system, as from hemorrhage or cholera, the conditions were different. In the anæmia coincident with neurasthenia, hysteria, chlorosis and so forth we had a condition, as far as quantity was concerned, the same as that of hyperæmia. In anæmia the condition was very favorable to dilatation of the blood vessels, producing exaggerated intracranial pressure. It was in just such cases that the vasomotor centres were very prone to excitation and local hyperæmia.

In summing up, the author stated that the seat of pain, in headache, was always in the dura mater and not in the cortex. That the pain was provoked by compression of the dura mater produced by increased intracranial pressure. That this was true of all headaches, occurring under the following heads; all neuroses, diseases of toxic origin, and those of mechanical origin, as diseases of the brain or meninges, constipation, etc., and lastly those of reflex origin. B. M.

On the Histology of Disseminated Sclerosis of the Brain and Spinal Cord.—By Michael Popaff (Neurologisches Centralblatt, No. 9, 1894).

In his researches on the nervous tissues of four cases of multiple sclerosis, Popaff employed a new method, involving three stains, namely, acid ruby, orange, and hæmatoxylin. By means of these stains, the axis-cylinders of the medullary nerve fibres were colored red, the medullary substance assumed a deep yellow, whilst the neuroglia and the sclerotic portions took on a violet hue with a reddish tinge.

The methods ordinarily employed are pronounced defective and have led to erroneous conclusions. Instead of being connective tissue, the sclerotic tissues are products resulting from the destruction of the nerve-fibres themselves. There is no connective tissue development, nor are the medullary sheaths alone affected; the axis cylinders as well are involved in the pathological process. In addition to the destruction of the nerve-fibres, there is also a regeneration of fibres, which may account for the fact that secondary degenerations in the cord are exceptional.

Popaff regards the blood-vessels as the starting point of the affection, from which the process extends concentrically outwards, embracing all the tissues surrounding them. The main changes in the vessels, consist of cellular infiltration of these walls, with consequent thickening, and at times with concentric diminution of the lumen.

The author recognizes two forms of multiple sclerosis, a subacute and a chronic form. In the former the cellular infilration of the walls is less uniform; the mural strata of the vessels are less compact; the number of leucocytes markedly greater; the course of the pathological process is not as gradual in the chronic form; and the medullary substance and axis-cylinders are affected to a greater extent. P. M.